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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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IM22/1122  
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EXAMINER
TRAN, T

ART UNIT	PAPER NUMBER
1741	

DATE MAILED: 11/22/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
**09/242,191**

Applicant(s)

**Rlera**

Examiner

**Thao Tran**

Group Art Unit  
**1741**



☒ Responsive to communication(s) filed on May 17, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claim

☒ Claim(s) 1-12 is/are pending in the applicat

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-12 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☒ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 6

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-5, 9, and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hideki et al. (JP 63277778).

Hideki teaches a device, comprising at least a first means and a second means for generating a first and a second magnetic fields (see abstract; Figs. 1 and 13-14).

With respect to a predefined angle between the directions of the first and second magnetic fields, it appears that the reference does teach a predefined angle between the magnetic fields (see Fig. 14).

Although Hideki is silent with respect to ~~an~~ magnetic fields having an amplitude varied over time, it would have been obvious to one of ordinary skill in the art that varying an amplitude of a magnetic field would be adjustable and would not be patentably distinct over prior art. See *In re Stevens*, 101 USPQ 284 (CCPA 1954).

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In regards to claim 3, Hideki teaches the first and second means for generating magnetic fields being coils that are connected to electric currents independently (see Fig. 1), the currents having variable frequencies (60 Hz, 50 Hz or below) (see p. 500).

In regards to claims 4-5, Hideki teaches the use of sinusoidal currents of the same amplitude, but different frequency and being shifted in phase by 30 or 210° (see Figs. 5-6; pp. 400-500). Although Hideki does not specifically teach the sinusoidal currents of the same frequency but different amplitude and being shifted in phase by 90°, it would have been obvious to one of ordinary skill in the art that adjusting the parameters to specific values would have been determined by optimization through routine experimentation, depending upon user's preference and intended use. See *In re Boesch*, 205 USPQ 215 (CCPA 1980); *In re Antonie*, 195 USPQ 6 (CCPA 1977); *In re Aller*, 105 USPQ 233, 235 (CCPA 1955).

In regards to claim 9, Hideki teaches several parallel magnetic field planes (see Figs. 11-12).

In regards to claims 11-12, it has been held that the material being worked upon by the equipment would have very little patentable weight when an apparatus claim is being considered for its patentability. See *In re Young*, 25 USPQ 69 (CCPA 1935).

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3. Claims 1 and 3-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larson et al. (US Pat. 4,865,747).

Larson teaches a device comprising at least a first and a second means for generating a first and a second magnetic fields in a given medium (fluid), wherein the magnetic fields vary in direction and amplitude (see col. 1, lines 11-19).

Although Larson is silent with respect to a predefined angle between the directions of the first and second magnetic fields, it has been within the skill in the art that adjustability of parts is not patentably distinct over prior art. See *In re Stevens*, 101 USPQ 284 (CCPA 1954).

In regards to claims 3-5, Larson teaches the first and second means for generating magnetic fields are electromagnetic coils (see col. 3, lines 62-68). Although Larson is silent with respect to the current amplitude, frequency, and form; it has been held that adjustability of parts is not patentably distinct over prior art. See *In re Stevens*, 101 USPQ 284 (CCPA 1954).

In regards to claims 6-7, Larson teaches that the given medium in the device is a fluid (see col. 1, lines 12-15) and that the first and second means for generating a magnetic field are disposed on the exterior or inside the pipe (conduit) (see col. 1, lines 44-62).

In regards to claim 8, although Larson does not specifically teach that the magnetic field plane forms an angle of between 45 and 90° with the direction of the fluid flow, it would have been obvious that the position of the magnetic field with respect to the direction of the fluid flow would have been determined by optimization through routine experimentation, depending upon

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user's preference and intended use. See *In re Boesch*, 205 USPQ 215 (CCPA 1980); *In re Antonie*, 195 USPQ 6 (CCPA 1977); *In re Aller*, 105 USPQ 233, 235 (CCPA 1955).

In regards to claim 9, although Larson does not specifically teach a plurality of parallel magnetic field planes in the device, it has been held that mere duplication of parts has no patentable significance. See *In re Harza*, 124 USPQ 378 (CCPA 1960).

In regards to claim 10, Larson teaches the means for generating a magnetic field of variable amplitude comprising a pair of coils and a ferromagnetic core of various shapes (see col. 10, lines 3-14). Although Larson does not specifically teach the ferromagnetic core of U-shaped or E-shaped, Larson does teach a ferromagnetic core of various shapes. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the configurations of the core would have been an obvious design choice, depending upon operating conditions and user's preference and intended use; hence would have little patentable weight. See *In re Dailey*, 149 USPQ 47 (CCPA 1966); *In re Kuhle* 188 USPQ (CCPA 1975).

In regards to claims 11-12, Larson teaches the medium being limestone water (calcium carbonate water) (see col. 8, lines 21-23). Moreover, with respect to the liquid being used in the device, it has been held that the material being worked upon by the equipment would have very little patentable weight when an apparatus claim is being considered for its patentability. See *In re Young*, 25 USPQ 69 (CCPA 1935).

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3. Claims 1-2 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faunce et al. (US Pat. 438,579).

Faunce teaches a device having at least a first and a second means for generating a first and a second magnetic fields, being placed in each magnetic field plane (see Fig. 1; pp. 1-2, lines 81-70; claims 1-4).

Although Faunce is silent with respect to the directions of the first and second magnetic fields subtending between them a predefined angle and to at least one of the magnetic fields having an amplitude varied over time to create a resultant moving magnetic field, it has been held that adjustability of parts is not patentably distinct over prior art. See *In re Stevens*, 101 USPQ 284 (CCPA 1954).

In regards to claim 2, Faunce teaches the first means for generating a magnetic field is a permanent magnet and the second means for generating a magnetic field is a coil (see p. 2, lines 60-64). With respect to varying the current applied to the coil, see paragraph in claim 1.

In regards to claim 6, Faunce teaches that the medium in the device is a fluid flowing through a pipe (conduit), and that the first and second means for generating a magnetic field are disposed on the exterior of the pipe (see pp. 1-2, lines 98-6, lines 50-56; claims 1-2).

In regards to claim 7, although Faunce does not teach that the first and second means for generating a magnetic field are disposed inside the pipe, it has been held that mere rearrangement of parts an obvious matter of design choice and, therefore, has little patentable weight. See *In re*

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*Kuhle*, 188 USPQ 7 (CCPA 1975); *Ex parte Chicago Rawhide Mfg. Co.*, 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984).

In regards to claim 8, although Faunce does not specifically teach that the magnetic field plane forms an angle of between 45 and 90° with the direction of the fluid flow, it has been held that adjustability of parts is not patentably distinct over prior art. See *In re Stevens*, 101 USPQ 284 (CCPA 1954).

In regards to claim 9, Faunce teaches several parallel magnetic field planes (see Fig. 1; p. 2, lines 1-10).

#### ***Contact Information***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao Tran whose telephone number is (703) 306-5698. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathryn Gorgos, can be reached on (703) 308-3328. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3599.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0661.




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T.T.

November 20, 2000

  
**Kathryn Gorges**  
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